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REVIEW OF THE GENUS *ADRIMUS* BATES, 1872 (INSECTA: COLEOPTERA: CARABIDAE: PTEROSTICHINI)

STEFANO L. STRANEO[1]
Research Associate, Section of Invertebrate Zoology

ABSTRACT

The taxonomic position of the Neotropical genus *Adrimus* Bates among pterostichines is discussed. A key to species is presented. Eleven new species are described: *Adrimus claripes* (Brazil), *A. latibasis* (Argentina), *A. suturalis* (Brazil), *A. elytralis* (Bolivia), *A. ventralis* (Brazil), *A. balli* (Brazil), *A. proximus* (Paraguay), *A. longior* (Brazil), *A. paulensis* (Brazil), *A. matoanus* (Brazil), and *A. irideus* (Argentina).

INTRODUCTION

The Neotropical carabid genus *Adrimus* was described by Bates (1872:176) to include pterostichines very closely related to the species of *Loxandrus* LeConte. As in *Loxandrus,* species of the genus *Adrimus* lack a scutellar stria on each elytron and have a single puncture at about mid-length on the third elytral interval. All species of *Adrimus* have a complete anterior submarginal border which is greatly widened in the middle and separated from the pronotal disc by a very deep sulcus, but this character state is also found in a few species of *Loxandrus.* Thus the only differences between the two genera are: the three basal protarsomeres of male *Loxandrus* (Fig. 1) are obliquely dilated to the inside (medial or anterior to the protarsal midline), whereas in *Adrimus* (Fig. 2) the three basal male protarsomeres are equally dilated on both sides of the protarsal midline as in most pterostichines; the metepimera of *Adrimus* species are very short and truncated at the apex (Fig. 3), whereas in *Loxandrus* (Fig. 4) they are longer and rounded at the apex. Keys to the genera of Neotropical Pterostichini are in Straneo (1977, 1979), and Neotropical *Loxandrus* were revised by Straneo (1991).

From what little is known about the ecology of *Adrimus* species, it appears to be similar to that of *Loxandrus.* Individuals are found near watercourses and wet places, often under the bark of logs or dead trees. They are often drawn to white or ultraviolet light, but always near damp locations. The genus *Loxandrus* is widespread, with many species in Australia, Sulawesi, South and Central America, the West Indies, and the southern portion of North America. The species differ greatly in size, shape and color, and many species have been collected in great numbers. The genus *Adrimus,* on the other hand, is confined to a few regions in South America (except for one species from Guatemala), and specimens are relatively rare. The species are all very similar in size, shape and color. One species reaches 11 mm in length, but the others are between 6 and 9 mm in length. Females predominate among specimens collected at light.

The identification of species of *Adrimus* is difficult. I have found only the following characters to be useful: size, color of legs or (in a few species) of dorsal surface or abdominal apex, dimensions of eyes, shape of pronotum and elytra, and relative size of pronotum compared with elytra. I do not use the shape of the

[1] Viale Romagna No. 10, 20133 Milano, Italy.
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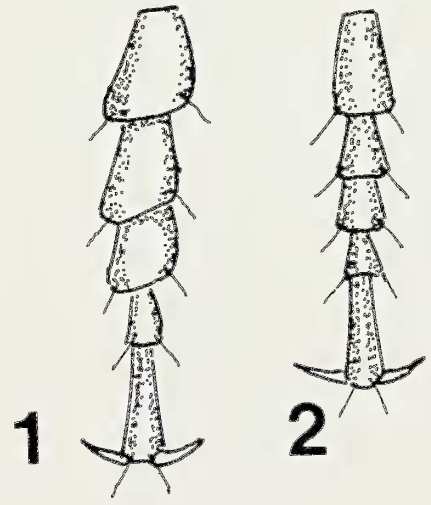
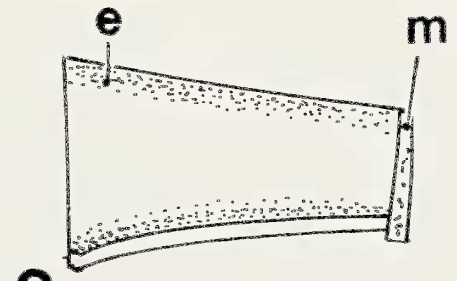
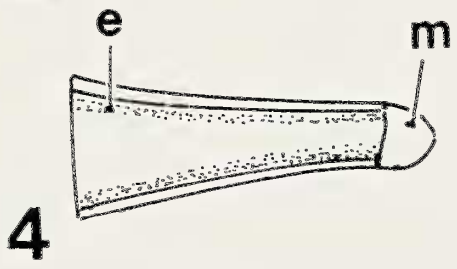
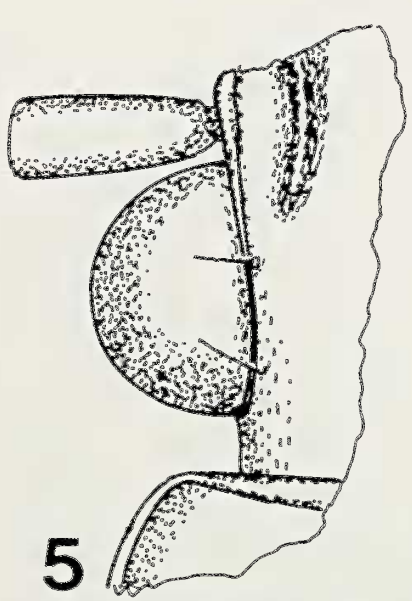
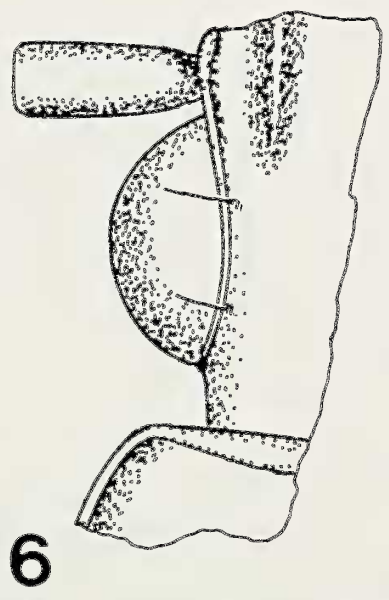
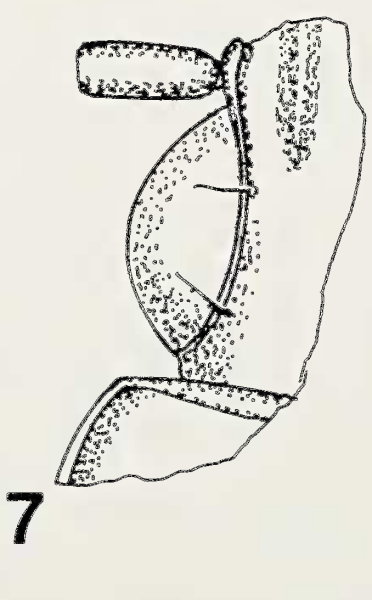












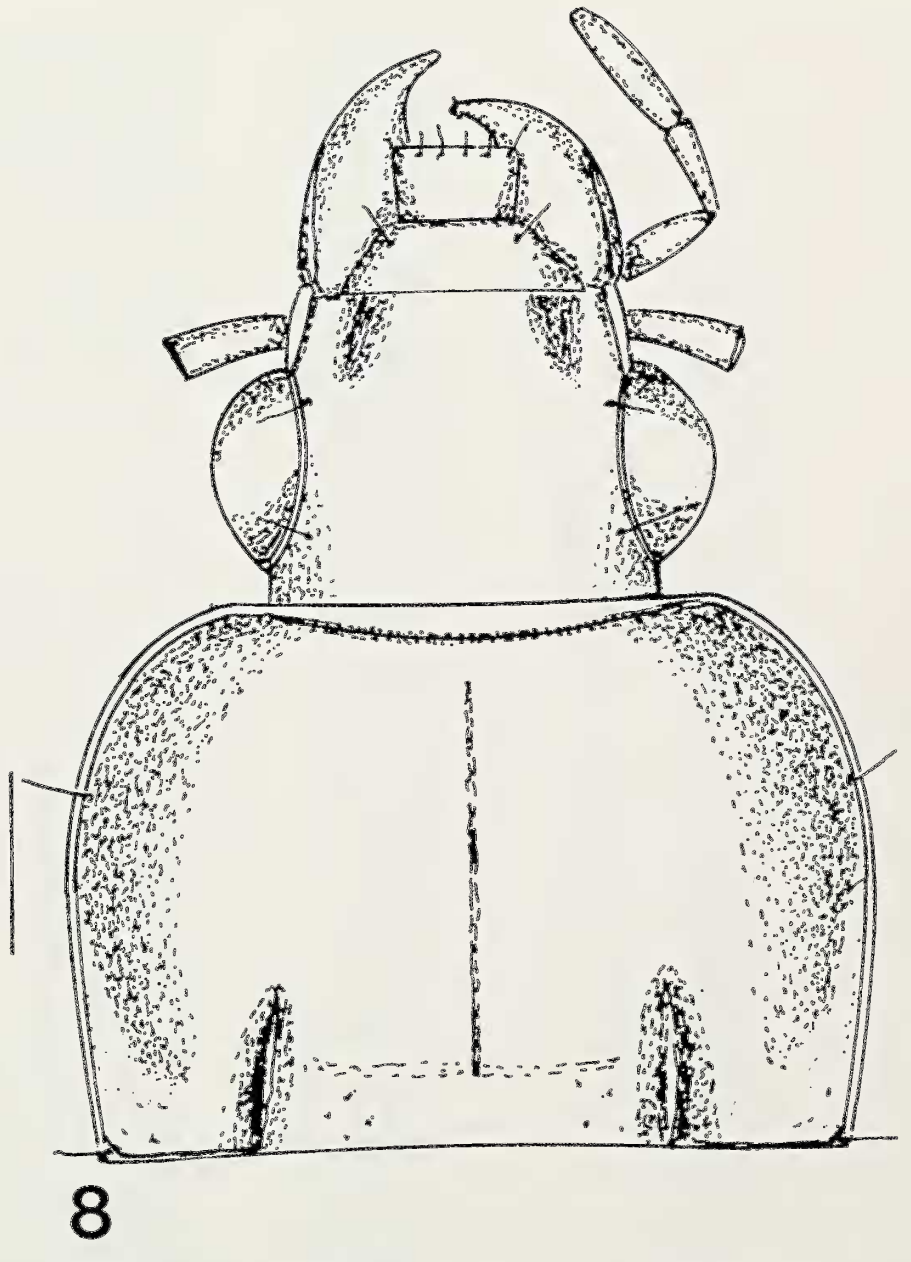


Fig. 1–8.—Diagnostic features of *Adrimus* and *Loxandrus* species. 1, protarsus of male *Loxandrus*; 2, protarsus of male *Adrimus*; 3, metepisternum (e) and metepimeron (m) of *Adrimus*; 4, metepisternum (e) and metepimeron (m) of *Loxandrus*; 5, eyes of *Adrimus* showing very convex, almost hemispherical outline; 6, eyes of *Adrimus* showing moderately convex outline; 7, eyes of *A. proximus* showing relatively flat outline; 8, head and pronotum of *A. uruguaicus* (scale line = 1 mm).

aedeagus in the key and the descriptions of species. For many species of *Adrimus,* males are not known. In known males, I have found that the aedeagus is very poorly sclerotized and very uniform in shape, without appreciable differences between species.

The following species have already been described:

Adrimus fuscipes (Brullé, 1834) (described as *Drimostoma fuscipes,* recognized by Chaudoir (1872:13) as belonging to *Adrimus*)
A. viridescens (Bates, 1871) (described in *Loxandrus*)
A. creperus Bates, 1872
A. geminatus Bates, 1872
A. microderus Bates, 1872
A. rufangulus Bates, 1872
A. olivaceus Bates, 1882
A. aenescens Tschitschérine, 1900
A. affinis Tschitschérine, 1900
A. virens Tschitschérine, 1901
A. uruguaicus Tschitschérine, 1903

Reports of *Adrimus* in the entomological literature are scarce. Reichardt (1977: 408) cited *Adrimus* as a genus near *Loxandrus* that included ten species. In my keys to South American genera of Pterostichini (Straneo, 1977, 1979), *Adrimus* was placed near *Loxandrus* and separated from it by the shape of the metepimera. In those papers, I erroneously included *Adrimus* among the Pterostichini with male basal protarsomeres obliquely dilated, an error which I correct here. Tschitschérine (1900:244) partially redescribed *A. fuscipes* (Brullé) and wrote that many other species remained to be discovered. Bates (1882) also noted that specimens of *Adrimus* are rare. Indeed, among many thousands of South American pterostichines I have received for identification over a 40-year period, I have seen until recently only a very few specimens of *Adrimus.* In the last few years I have seen about 50 additional specimens among undetermined material presented to me by my late friend Jacques Nègre, and among undetermined specimens lent to me by several institutions.

The study of this new material with the specimens already in my collection and aided by examination of the types of two poorly known species, *A. fuscipes* (Brullé) and *A. uruguaicus* Tschitschérine, revealed numerous undescribed spec es. This induced me to publish this review, which I consider highly provisional as further collecting in South America will no doubt produce additional new species.

To facilitate identification, the species of *Adrimus* have been informally divided into two groups. Group One includes black or blackish-brown species without metallic tinges or coloration. Group Two includes species with the upper surface (at least of the elytra) with distinct metallic coloration, generally green, greenish or aeneous. The species of Group Two are less familiar to me. To make the key as complete as possible, I have interpreted the names of species in Group Two according to the original descriptions, supplemented, in some cases, by identified material in my collection. All of the new species described herein belong in Group One, and I have seen the types of two of the three previously described species. Thus in Group One only *A. rufangulus* Bates is interpreted from the original description.

Material studied is in the following collections: Carnegie Museum of Natural History (CMNH); Collection Straneo (CS); Fundación Miguel Lillo, Tucumán (FMLT); and University of Alberta, Strickland Museum (UASM). The type of *A.*

fuscipes (Brullé) was borrowed from the Muséum National d'Histoire Naturelle de Paris, and the type of *A. uruguaicus* Tschitschérine was borrowed from the Institut Royal des Sciences Naturelles de Belgique. I indicate by r_d (*ratio dimensionum*) the ratio between length and width of an insect or any of its parts; aw = anterior width; bw = basal width; gw = greatest width.

Key to Adults of *Adrimus*

1. Entire upper surface black or dark brown without metallic coloration (Group One) 2
1′. Upper surface (at least elytra) with evident metallic coloration, green, greenish or brassy (Group Two) 16
2(1). Eyes very convex (Fig. 5); legs entirely ferrugineous 3
2′. Eyes moderately convex or not very convex (Fig. 6, 7); legs brown or ferrugineous 4
3(2). Pronotum obviously narrowed toward base (Fig. 9); lateral border narrower; sides subsinuate before basal angles; size 8 mm; Brazil: Alagoas ..... *Adrimus claripes,* new species
3′. Pronotum less narrowed toward base (Fig. 10); lateral border wider; sides not subsinuate before basal angles; size 8.5 mm; Argentina: Salta ..... *Adrimus latibasis,* new species
4(2′). Elytra with posterior half of sutural interval and small portion of apical margin ferrugineous; under surface at least partly ferrugineous brown; size small (6–6.5 mm) 5
4′. Sutural intervals concolorous with rest of elytra 6
5(4). All elytral striae equally impressed; pronotum shaped as in Fig. 11, sides subsinuate toward base; upper surface blackish-brown, shiny; legs ferrugineous; Brazil: Santarem .... *Adrimus suturalis,* new species
5′. First four elytral striae deep and entire, first four intervals moderately convex, remaining striae deep at base and apex, evanescent at middle; pronotum as in Fig. 12, sides not subsinuate toward base; upper surface black, shiny, subiridescent; legs lighter; Bolivia ..... *Adrimus elytralis,* new species
6(4′). Larger (10.5–11 mm); upper surface piceous, shiny, slightly iridescent, base of antennae and legs (except tibial apex) testaceous red; pronotum transverse, sides slightly arcuate, slightly narrowed behind, base with coarse punctures, basal angles and lateral margins near base light red; abdomen piceous; elytral striae deep, punctate; Brazil: Ega ..... *Adrimus rufangulus* Bates
6′. Smaller (9 mm or less) 7
7(6′). All elytral striae deeply and uniformly impressed; intervals moderately or strongly convex both on disc and laterally 8
7′. Only inner striae deeply impressed, inner intervals convex, outer striae deeply impressed at base and apex, shallower and finer toward middle, outer intervals flat 15
8(7). Pronotum subcordate, anterior angles strongly deflected 9
8′. Pronotum not subcordate, at most a little narrowed posteriorly, sides not sinuate toward basal angles; pronotum in most species more transverse 10
9(8). Dorsal surface piceous brown, elytra not or slightly iridescent; pronotum (Fig. 14) less narrowed posteriorly, basal angles slightly ob-

tuse, some faint punctures at basal angles and middle of base; elytral striae moderately deep, intervals 2–3 moderately convex, 4–7 less convex at middle, all intervals convex at apex; length 7.8–8.5 mm; French Guiana ..... *Adrimus fuscipes* (Brullé)

9′. Dorsal surface black, iridescent; pronotum longer, more narrowed posteriorly, basal angles square, impunctate, middle of base with many large punctures; elytral striae deep, intervals convex, especially lateral ones; length 9 mm; Brazil: Ega ..... *Adrimus microderus* Bates

10(8′). Legs light ferrugineous; antennae dark brown with basal antennomeres ferrugineous; upper surface black, pronotum and elytra with narrow ferrugineous border, abdominal apex ferrugineous; elytra shiny, iridescent, deeply striate, disc slightly convex; pronotum as in Fig. 15; size 6.7–8 mm; Brazil: Alagoas ..... *Adrimus ventralis,* new species

10′. Legs brown or at least with femora and trochanters darker than tibiae 11

11(10′). Less slender species (r_d of body = 2.35, r_d of elytra = 1.38); pronotum with sides strongly rounded (Fig. 16), pronotum greatly narrowed anteriorly and posteriorly (aw/gw = 0.68, bw/gw = 0.80); eyes large but moderately convex (Fig. 6); elytral striae deep, nearly impunctate; size 7.7 mm; Brazil: Pará ..... *Adrimus balli,* new species

11′. More slender species (r_d of body = 2.43–2.58) 12

12(11′). Pronotum (Fig. 17) more narrowed anteriorly (aw/gw = 0.59), transverse (r_d = 0.68), space between basal impressions and hind angles nearly flat; elytra relatively short (r_d = 1.40); eyes flatter (Fig. 7); Paraguay: Dept. Central ..... *Adrimus proximus,* new species

12′. Pronotum less narrowed anteriorly (aw/gw = 0.67–0.74) 13

13(12′). Pronotum (Fig. 18, 19) longer (r_d = 0.73–0.75), less narrowed anteriorly (aw/gw = 0.73–0.74) and more narrowed toward base (bw/gw = 0.87–0.89) 14

13′. Pronotum (Fig. 8) more transverse (r_d = 0.67), strongly narrowed anteriorly (aw/gw = 0.67), very little narrowed toward base (bw/gw = 0.93); Uruguay ..... *Adrimus uruguaicus* Tschitschérine

14(13). Elytra more elongate (r_d = 1.55); pronotum as in Fig. 18; elytral epipleura and lateral border of pronotum black; size 8.7 mm; Brazil: Santa Catarina ..... *Adrimus longior,* new species

14′. Elytra shorter (r_d = 1.45); pronotum as in Fig. 19; elytral epipleura and lateral border of pronotum reddish; size 8.8 mm; Brazil: Estado São Paulo ..... *Adrimus paulensis,* new species

15(7′). Smaller (6.7 mm), less convex; head and pronotum blackish-brown, elytra black, not iridescent, antennae blackish with ferrugineous scape; pronotum as in Fig. 20; elytra elongate (r_d = 1.80) with disc flat; Brazil: Mato Grosso ..... *Adrimus matoanus,* new species

15′. Larger (8.5 mm), more convex; upper surface black, shiny and iridescent on elytra, lateral border of pronotum brown, especially near basal angles; pronotum as in Fig. 21; elytra shorter, more convex (r_d = 1.47); Argentina: Entre Rios ..... *Adrimus irideus,* new species

16(1′). Pronotum little narrowed toward base with sides not or slightly convergent behind 17

16′. Pronotum with sides more uniformly rounded or more strongly narrowed toward base 19

17(16). Upper surface bronze with suture and lateral margins of elytra reddish; pronotum very transverse, much narrower than elytra, with lateral border not flattened at basal angle, sides with very narrow light-colored margin; size 8 mm; Brazil: Pará ... *Adrimus creperus* Bates

17′. Elytra unicolorous, without reddish suture and lateral margins; species from Guatemala and Venezuela 18

18(17′). Flatter, less convex; upper surface olivaceous bronze; basal angles of pronotum moderately raised, anterior angles very near to neck, base with coarse scattered punctures; elytra deeply striate, striae finely punctulate; size 9.5 mm; Guatemala ... *Adrimus olivaceus* Bates

18′. Elytra olivaceous, slightly iridescent, legs ferrugineous red, antennae piceous brown with three basal antennomeres reddish; lateral border of pronotum widened from anterior setigerous pore to posterior margin, narrowly flattened near basal angles, base punctate with deeper punctures near angles and along lateral margin; size 8.3 mm; Venezuela: Caracas ..... *Adrimus affinis* Tschitschérine

19(16′). Smaller (5.5 mm); upper surface bronze with shiny green elytra, legs, palpi and basal antennomeres reddish; striae all well impressed, nearly smooth except inner striae very finely punctulate at base; intervals flattened on disc; Brazil: Pará .... *Adrimus aenescens* Tschitschérine

19′. Larger (6–7.5 mm) 20

20(19′). Upper surface metallic green, elytra lighter, legs and antennae dark, basal antennomeres and knees reddish; lateral border of pronotum narrow; lateral border of pronotum, apical part of elytral margin and suture yellowish-red; size 7–7.5 mm; Venezuela ....*Adrimus virens* Tschitschérine

20′. Upper surface piceous black, elytra with slight greenish iridescence, legs and antennae testaceous red; lateral border of pronotum reddish; elytra sericeous; pronotum very transverse, small, much narrower than elytra, base with a few coarse punctures, lateral margin flattened posteriorly; size 6–6.5 mm; Brazil 21

21(20′). Width of elytral intervals 4 and 6 subequal to adjacent intervals . ..... *Adrimus viridescens* (Bates)

21′. Elytral intervals 4 and 6 wider than adjacent intervals (probably only a variation of *A. viridescens* (Bates, 1872:177) ....*Adrimus geminatus* Bates

Descriptions of New Species

In the descriptions the following characters common to all *Adrimus* are not repeated: two supraorbital setae on each side of head; lateral border of pronotum with two setae on each side, one in anterior half and one at hind angle; last abdominal sternum with one pair of setae in males, two pairs in females; hind tarsi with three basal tarsomeres sulcate on both sides; hind tarsi with basal tarsomere subequal in length to second and third tarsomeres combined. Information listed under the heading *Type Specimens* is verbatim label data except in three cases where bracketed interpolations have been added for clarity. Many specimens are damaged or missing parts. I have described the damage and noted the missing appendages of the holotypes to aid in recognizing them in the future.

Adrimus claripes, new species
(Fig. 9)

Type specimens.—*Holotype,* male (CMNH): Brazil, Alagoas, San Miguel dos Campos, IV.1984, F. M. Oliveira; *Allotype,* female (CS), two *paratypes,* females (CMNH), and one *paratype,* female (CS): same data as holotype. The holotype is missing seven antennomeres of the right antenna, the prothoracic and metathoracic right legs, and the mesothoracic left leg. Specimens examined: 5.

Diagnosis.—Group One species distinguished by very convex eyes; entirely pale legs; pronotum narrowed toward base with sides subsinuate before hind angles.

Description.—Length 7.5–8 mm (holotype 8 mm); greatest width 3.3–3.6 mm (holotype 3.3 mm). Upper surface black, lateral margin of pronotum reddish; legs, antennae and palpi ferrugineous, rather pale; underside dark brown.

Head (including eyes) as long as wide (1.5 mm); eyes very large and very convex (similar to Fig. 5); temples nearly disappeared; frontal impressions short, scarcely surpassing level of anterior supraorbital seta; frons moderately convex, smooth. Antennae long, extending beyond pronotal base by three antennomeres.

Pronotum (Fig. 9) transverse, very convex behind the deep submarginal sulcus; basal impressions deep; space between impressions and basal angles irregularly depressed (the single male holotype) or moderately convex and smooth (remaining specimens, all female); space between impressions depressed and coarsely punctate; median impressed line deep.

Elytra oblong, convex; length 5 mm; greatest width 3.6 mm at ⅔ length; basal border nearly straight toward very obtusely rounded humerus, obtusely joined to lateral border without angle; sides nearly straight and slightly divergent to greatest width, thence rounded to apex; preapical sinuosity faint; striae deep, very finely punctulate; intervals convex; dorsal puncture of third interval at mid-length.

Underside entirely impunctate, except metepisterna which are strongly punctate; metepisterna moderately narrowed posteriorly and less than 1.5 times longer than anterior width. Abdominal sterna with a depression on each side. Legs slender.

Etymology.—The name proposed for this species refers to its yellow-brown legs.

Adrimus latibasis, new species
(Fig. 10)

Type specimens.—*Holotype,* female (FMLT): Argentina, Salta Orán, Abra Grande 10.1–1.3.1963, R. Golbach. *Paratypes,* two (FMLT, CS), females: same data as holotype. All specimens immature and somewhat damaged. The holotype is missing the left antenna, seven antennomeres of the right antenna, all tarsi, and the right metathoracic leg. Specimens examined: 3.

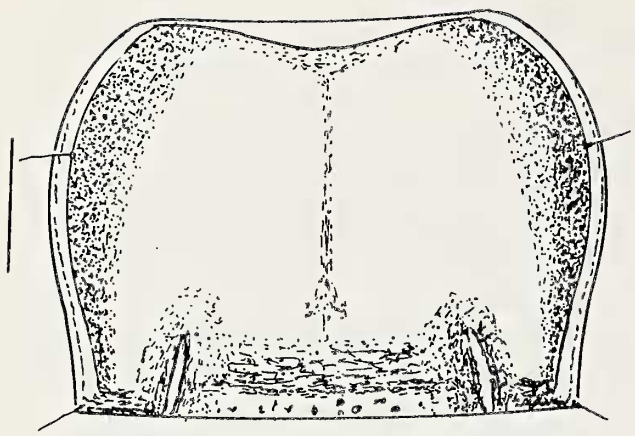
Diagnosis.—Group One species distinguished by very convex eyes; legs, palpi, and antennomeres light ferrugineous; pronotum very transverse and very little narrowed toward base.

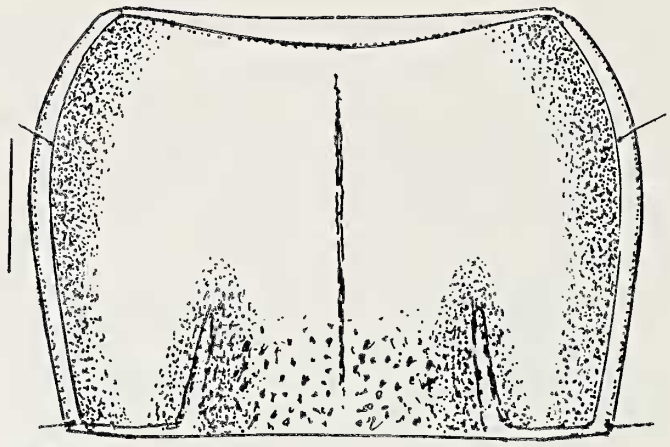
Description.—Length 8–8.8 mm (holotype 8.8 mm); greatest width 3.4–3.6 mm (holotype 3.6 mm). Upper surface blackish-brown; lateral margin of pronotum and elytra ferrugineous; basal antennomeres and legs light ferrugineous; underside and elytral epipleura light ferrugineous, probably from immaturity.

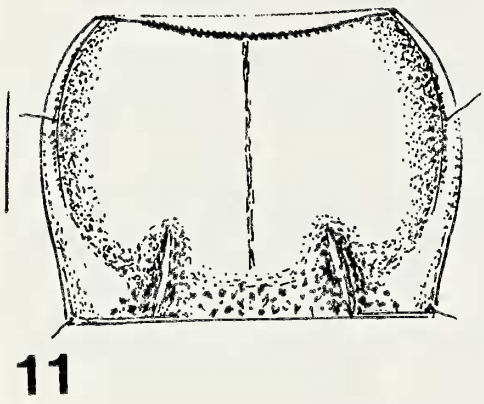
Head (including eyes) a little wider (1.6 mm) than long (1.5 mm); eyes very convex (similar to Fig. 5); temples disappeared; frontal impressions deep, elongate, reaching middle of eyes; frons very convex, smooth. Antennae thin, apical antennomeres missing in all specimens.

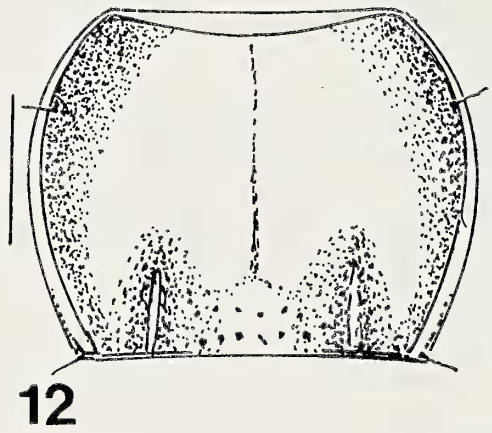
Pronotum (Fig. 10) transverse (r_d = 0.69), length 1.6 mm; moderately convex behind the thin submarginal sulcus; basal impressions short, deep, wide; space between impressions and basal angles convex; space between impressions slightly depressed with about ten scattered punctures on the inner side of impressions; hind angles square, not raised; median impressed line very deep and widened in middle.

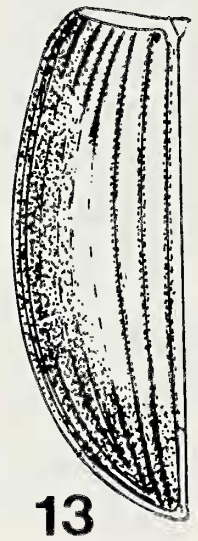
Elytra oblong, moderately convex, short (r_d = 1.39), length 4.8 mm, greatest width 3.5 mm; basal border nearly straight to obtusely rounded humerus, joined to lateral margin without angle; sides

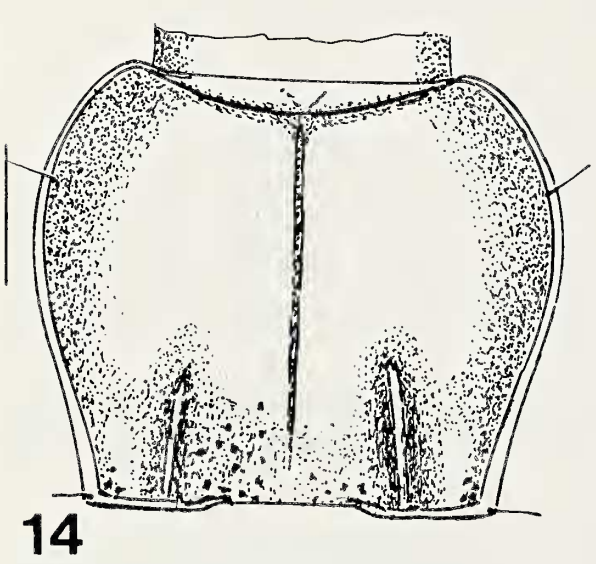












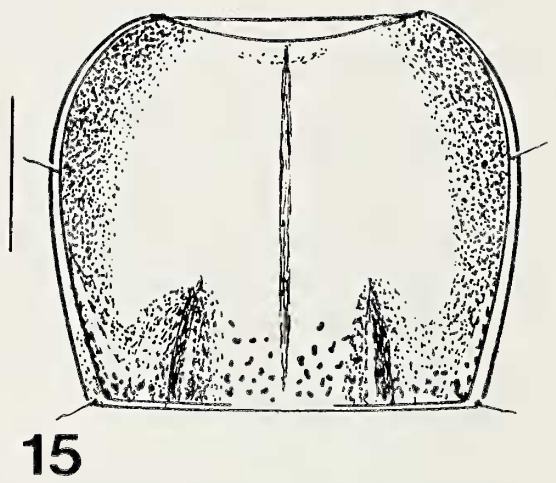


Fig. 9–15.—Pronota and elytra of *Adrimus*. 9, pronotum of *A. claripes*; 10, pronotum of *A. latibasis*; 11, pronotum of *A. suturalis*; 12, pronotum of *A. elytralis*; 13, left elytron of *A. elytralis*; 14, pronotum of *A. fuscipes*; 15, pronotum of *A. ventralis* (scale line = 1 mm).

nearly straight, subparallel; greatest width at ⅔ length, thence rounded to apex; preapical sinuosity distinct; striae very deep, finely punctulate; all intervals convex; dorsal puncture of third interval slightly posterior to mid-length.

Underside impunctate except mesepisterna and metepisterna; metepisterna moderately narrowed posteriorly, 1.2 times longer than anterior width; abdominal sterna without depressed area on each side. Legs relatively robust.

Etymology.—The name proposed for this species refers to the wide base of the pronotum.

Adrimus suturalis, new species
(Fig. 11)

Type specimens.—*Holotype,* male (CMNH): Santarem Brazil, Acc. No. 2966. *Allotype,* female (CS) and *paratype,* female (CMNH): same data as holotype. The holotype is missing the tarsi of the left metathoracic leg. Specimens examined: 3.

Diagnosis.—Group One species distinguished by small pronotum with parallel sides subsinuate toward base; pronotal base ferrugineous; pronotal and elytral margins and posterior half of elytral suture red.

Description.—Length 6.1 mm; greatest width 2.4 mm. Upper surface blackish with lateral margins of pronotum and elytra, base of pronotum, apical half of elytral suture, apical margin and epipleura of elytra, antennae and palpi light ferrugineous; elytra more or less iridescent; underside black.

Head (including eyes) a little longer (1.2 mm) than wide (1.1 mm); eyes moderately convex (similar to Fig. 6), temples nearly disappeared; frontal impressions moderately deep, short, barely reaching level of antennal insertion; frons moderately convex, smooth. Antennae elongate, extending beyond pronotal base by three apical antennomeres.

Pronotum (Fig. 11) length 1.2 mm, transverse (r_d = 0.75), moderately convex behind deep submarginal sulcus; basal impressions deep, wide; space between impressions and basal angles slightly depressed and with a few punctures; space between impressions not depressed, irregularly punctate; hind angles not raised; median impressed line shallow.

Elytra oblong, slightly convex; length 3.6 mm; humeri obtusely rounded, basal and lateral borders joining at obtuse angle; sides slightly divergent to greatest width at ⅔ length, thence obtusely rounded to apex; preapical sinuosity moderate; all striae deep and finely punctate; intervals moderately convex.

Underside entirely impunctate; metepisterna short, moderately narrowed behind; abdominal sterna with a moderate depression each side. Legs relatively slender.

Etymology.—The name proposed for this species was suggested by the ferrugineous elytral suture.

Adrimus elytralis, new species
(Fig. 12, 13)

Type specimen.—*Holotype,* female (CS); Bolivia, S.ta Cruz, Huflo de Chavez, Ascension, 500 m, 11–63. A single specimen, without name of collector, presented by J. Nègre. The holotype is damaged, only the first four antennomeres remaining of each antenna. Specimens examined: 1.

Diagnosis.—Group One species very easily recognized by small size and characteristic elytral striation (Fig. 13).

Description.—Length 6.3 mm; greatest width 2.5 mm. Head black, pronotum blackish, elytra black, very shiny, iridescent; lateral margin of pronotum and elytra reddish; four basal antennomeres (remainder lacking in only known specimen), palpi and elytral epipleura light ferrugineous; underside brown, abdomen a little lighter.

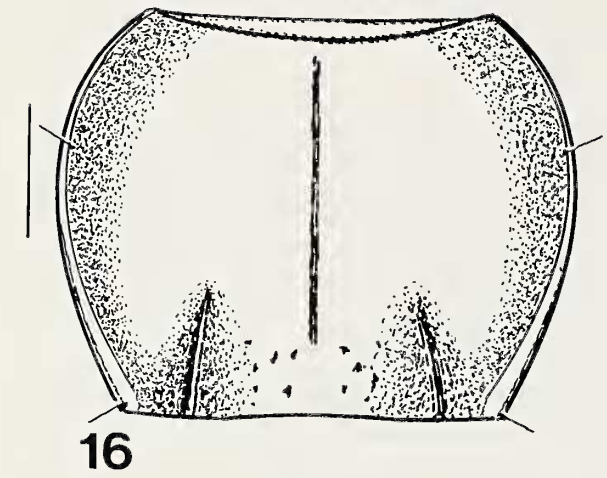
Head (including eyes) a little shorter than wide; eyes moderately convex (similar to Fig. 6), temples nearly disappeared; frontal impressions deep, short, not reaching level of anterior supraorbital setae; frons very convex, smooth.

Pronotum (Fig. 12); length 1.2 mm; transverse (r_d = 0.75); moderately convex behind deep submarginal sulcus; basal impressions wide, deep; space between impressions and basal angles nearly flat with a few punctures; space between impressions depressed, coarsely and sparsely punctate; hind angles somewhat raised; median impressed line moderately deep, nearly reaching base.

Elytra (Fig. 13) oblong, convex, especially posteriorly; length 3.6 mm; greatest width 2.5 mm; basal border slightly arcuate toward moderately rounded humeri, joined to lateral margin without angle; sides straight, moderately divergent to greatest width at ⅗ length, thence obtusely rounded to apex; preapical sinuosity moderate; striae deep near base and apex, striae 3–8 very shallow in middle, finely punctate near base.

Underside impunctate; metepisterna wide and short, moderately narrowed posteriorly, 1.2 times longer than anterior width. Legs slender.

Etymology.—The name proposed for this species refers to the characteristic striation of the elytra.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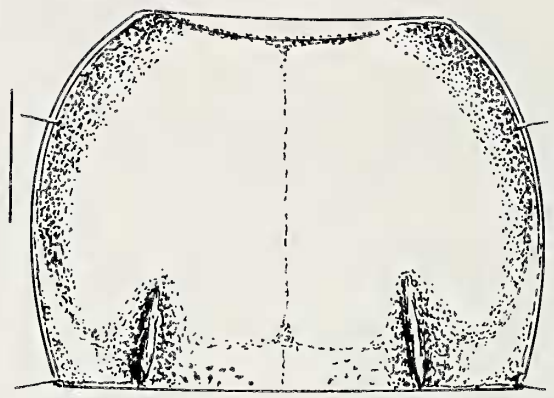
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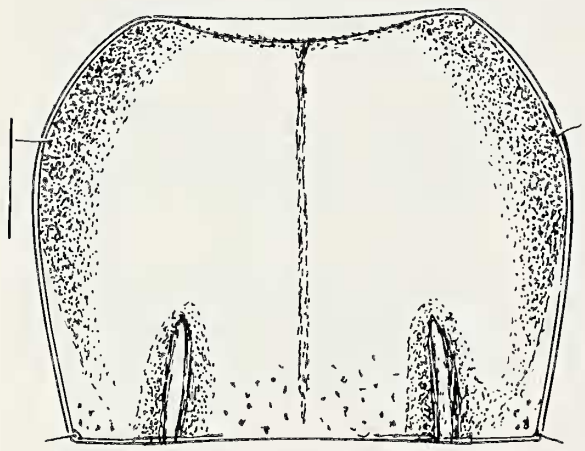
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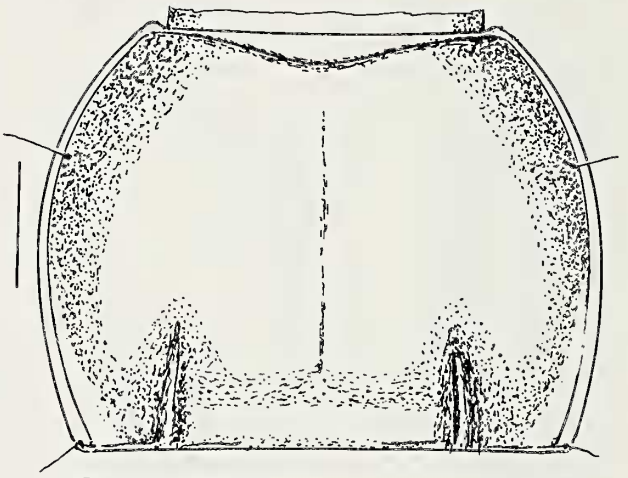
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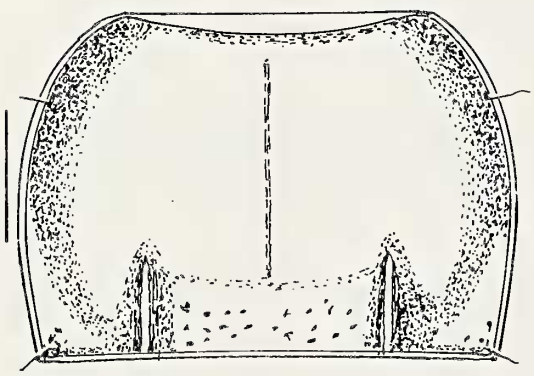
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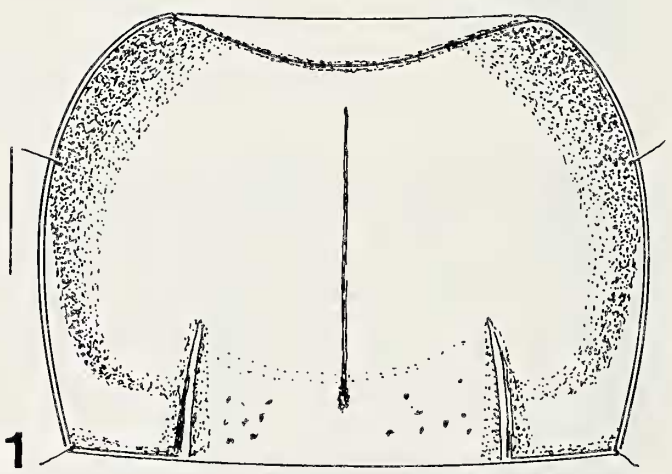
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Fig. 16–21.—Pronota of *Adrimus*. 16, *A. balli*; 17, *A. proximus*; 18, *A. longior*; 19, *A. paulensis*; 20, *A. matoanus*; 21, *A. irideus* (scale line = 1 mm).

Adrimus ventralis, new species
(Fig. 15)

Type specimens.—*Holotype,* male (CMNH): Brazil, Alagoas, San Miguel dos Campos, IV. 1984, F. M. Oliveira. *Allotype,* female (CS), four *paratypes* (CMNH), and one *paratype* (CS): same data as holotype. The holotype is missing three antennomeres of the left antenna, the tarsi of the right mesothoracic leg, and the tibia and tarsi of the right metathoracic leg. Specimens examined: 7.

Diagnosis.—Group One species distinguished by moderately convex eyes; legs, three basal antennomeres, lateral border of pronotum, elytral epipleura and apex of abdomen ferrugineous; lateral elytral striae shallow at middle.

Description.—Length 6.8–7 mm (holotype 7 mm); greatest width 2.8–3 mm (holotype 2.9 mm). Head blackish; pronotum dark brown with ferrugineous lateral margins; elytra black, shiny, not iridescent, epipleura ferrugineous; antennae brown with three basal antennomeres lighter; legs ferrugineous; underside dark brown with apex of abdomen ferrugineous.

Head (including eyes) a little shorter (1.2 mm) than wide (1.4 mm); eyes moderately convex (similar to Fig. 6), temples very short; frontal impressions deep, very short, barely reaching level of antennal insertions; frons convex, smooth. Antennae elongate, extending beyond pronotal base by three apical antennomeres.

Pronotum (Fig. 15); length 1.3 mm; moderately transverse (r_d = 0.68); moderately convex behind submarginal sulcus; basal impressions wide, moderately deep; space between impressions and basal angles flattened at basal angles; space between impressions very little depressed and with a variable number of punctures (7–10 each side in most specimens); hind angles not raised; median impressed line wide, deep.

Elytra oblong, disc flat; length 4.4 mm; greatest width 3 mm; basal border rather strongly curved to moderately rounded humeri, joined to lateral margin without angle; sides very slightly arcuate, moderately divergent to greatest width at ⅔ length, thence very obtusely rounded to apex; preapical sinuosity faint; striae 1–4 deep, remaining striae deep at base and apex, shallower in middle; striae nearly impunctate; all intervals convex.

Underside entirely impunctate; metepisterna short, barely longer than anterior width. Legs slender.

Etymology.—The name proposed for this species draws attention to the ferrugineous abdominal apex.

Adrimus balli, new species
(Fig. 16)

Type specimens.—*Holotype,* male (UASM): Brazil, Pará, Belem, Mocambo, For. Reserve, Igapò for. Brasil Exp. 1978, G. E. & K. Ball collectors. *Allotype,* female (CS) and two *paratypes* (UASM): same data as holotype. The holotype is missing the left antenna, five antennomeres of the right antenna, and the left metathoracic leg. Specimens examined: 4.

Diagnosis.—Group One species distinguished by relatively stout body and large size, uniformly rounded pronotal sides, moderately transverse pronotum with basal angles slightly but obviously raised.

Description.—Length 8.2–8.5 mm (holotype 8.5 mm); greatest width 3.2 mm. Upper surface black, shiny, elytra with faint iridescence; legs reddish-brown; antennae brown with three basal antennomeres ferrugineous; underside brown, apical margin of last sternum a little lighter.

Head length 1.9 mm; width (including eyes) 1.5 mm; eyes moderately convex (similar to Fig. 6), temples about ⅕ eye length; frontal impressions short, barely reaching level of antennal insertions; frons moderately convex, smooth. Antennae elongate, extending beyond pronotal base by four apical antennomeres.

Pronotum (Fig. 16); length 1.6 mm; moderately transverse (r_d = 0.74); moderately convex behind submarginal sulcus; basal impressions short, wide; space between impressions and hind angles convex, inclined toward hind angles which are obviously raised; space between impressions slightly depressed with a few small punctures; median impressed line moderately deep.

Elytra oblong, disc convex in middle; length 4.5 mm; greatest width 3.2 mm; basal border slightly curved toward obtusely rounded humeri, joined to lateral margin without angle; sides nearly straight, slightly divergent to greatest width at ⅔ length, thence obtusely rounded to apex; preapical sinuosity moderate; striae deep, impunctate; all intervals convex.

Underside entirely impunctate; metepisterna moderately narrowed posteriorly, length 1.2 times anterior width; abdominal sterna smooth. Legs moderately slender.

Etymology.—It is with great pleasure that I dedicate this species to my friend Prof. George E. Ball.

Adrimus proximus, new species
(Fig. 7, 17)

Type specimens.—*Holotype,* male (CMNH); Paraguay, Dept. Central, San Lorenzo, 23–24 Nov. 1986, John Kochalka, uv light. *Allotype,* female (CS), four

paratypes (CMNH) and one *paratype* (CS): same data as holotype. The holotype is missing two antennomeres of the left antenna. Specimens examined: 7.

Diagnosis.—Group One species distinguished by relatively flat eyes, elytral suture concolorous with rest of elytra, size 7.2–7.4 mm, legs brown, pronotum moderately narrowed posteriorly.

Description.—Length 7.2–7.4 mm (holotype 7.3 mm); greatest width 3 mm. Upper surface black, shiny, pronotum a little brownish with basal half of lateral border and hind angles ferrugineous; legs brown, tibiae and tarsi a little lighter; antennae dark brown with three basal antennomeres lighter; palpi ferrugineous; underside blackish-brown.

Head (including eyes) a little longer (1.4 mm) than wide (1.3 mm); eyes relatively flat, not very convex (Fig. 7), temples about ⅛ eye length; frontal impressions moderately deep, short, barely reaching level of anterior margin of eyes; frons convex, smooth. Antennae elongate, extending beyond pronotal base by four apical antennomeres.

Pronotum (Fig. 17); length 1.5 mm; moderately transverse (r_d = 0.72); slightly convex behind moderately deep submarginal sulcus; basal impressions deep, extending to but shallower near basal angles; space between impressions and basal angles flattened; space between impressions moderately depressed, sparsely punctate; basal angles not raised; median impressed line shallow.

Elytra oblong, moderately convex; length 4.3 mm; greatest width 3 mm; basal border very slightly curved to obtusely rounded humeri, joined to lateral margin without angle; sides very slightly arcuate to greatest width at ⅔ length, thence obtusely rounded to apex; preapical sinuosity very faint; striae deeply impressed and nearly impunctate.

Underside impunctate; metepisterna moderately narrowed posteriorly, length 1.2 times anterior width; abdominal sterna not or very slightly impressed on sides. Legs slender.

Etymology.—The name proposed for this species refers to its close resemblance to *A. uruguaicus* Tschitschérine.

Adrimus longior, new species
(Fig. 18)

Type specimens.—*Holotype,* male (CS): Brasilien, [Santa Catarina,] Nova Teutonia 27°11′, 52°23′ L, 3500 m, Fritz Plaumann. *Allotype,* female (CS), and *paratype,* male (CS): same data as holotype. The holotype is missing ten antennomeres of the right antenna and nine antennomeres of the left antenna. Specimens examined: 3.

Diagnosis.—Group One species distinguished by pronotal shape, with base punctate, narrow lateral border, and deep impunctate striae of elongate elytra.

Description.—Length 8.5–9.2 mm (holotype 9.2 mm); greatest width 3.3–3.5 mm (holotype 3.4 mm). Upper surface piceous-black, slightly shiny, elytra with a faint iridescence in some specimens; lateral margins of pronotum and elytra not reddish; legs brown, tarsi a little lighter; antennae brown with three basal antennomeres a little lighter; palpi ferrugineous; underside blackish.

Head (including eyes) as long as wide (1.6 mm); eyes moderately convex (similar to Fig. 6), temples nearly disappeared; frontal impressions moderately impressed, short, barely reaching level of anterior margin of eyes; frons moderately convex, smooth. Antennae elongate, extending beyond pronotal base by three apical antennomeres.

Pronotum (Fig. 18); length 1.7 mm; moderately transverse; slightly convex behind deep submarginal sulcus; basal impressions short; space between impressions and basal angles nearly flat, depressed at angles; space between impressions not depressed, with a few punctures; hind angles slightly raised; median impressed line moderately wide, deep on disc, very thin posteriorly, reaching base.

Elytra elongate, disc slightly convex, more convex at apex; length 5.1 mm, greatest width 3.5 mm; basal border moderately curved forward toward moderately rounded humeri, joined to lateral margin without angle; sides very little arcuate, nearly straight, slightly divergent to greatest width at ⅔ length, thence strongly rounded to apex; preapical sinuosity very slight; striae deep, all equally impressed, not distinctly punctate.

Underside entirely impunctate, smooth; metepisterna narrowed posteriorly, length 1.5 times anterior width. Legs moderately slender.

Etymology.—The name proposed for this species refers to the relatively elongate elytra compared with closely allied species.

Adrimus paulensis, new species
(Fig. 19)

Type specimens.—*Holotype,* male (CS): [BRAZIL:] San Paulo Capital, Interlagos, Dr. Nick, 19.11.50. *Allotype,* female (CS): [BRAZIL:] San Paulo Capital, Sto Amaro, Dr. Nick, 21.9.54. The holotype is missing seven antennomeres of the right antenna and five antennomeres of the left antenna. Specimens examined: 3.

Diagnosis.—Group One species distinguished by pronotal shape, with sides uniformly arcuate, lateral border widened toward basal angles, base wholly impunctate.

Description.—Length 7.8–8.5 mm (holotype 8.4 mm); greatest width 3–3.2 mm (holotype 3 mm). Upper surface black with lateral margins of pronotum and elytra reddish; legs and antennae reddish brown, scape and palpi lighter; underside brown with elytral epipleura reddish.

Head (including eyes) a little longer than wide (1.5 mm); eyes moderately convex (similar to Fig. 6), temples very short; frontal impressions narrow, short, barely reaching level of anterior margin of eyes; frons rather convex, smooth. Antennae elongate, extending beyond pronotal base by three apical antennomeres.

Pronotum (Fig. 19); length 1.7 mm; transverse (r_d = 0.71), moderately convex behind very deep submarginal sulcus; basal impressions deep; space between impressions and basal angle nearly flat, inclined toward impressions; space between impressions depressed, impunctate; hind angles not raised; median impressed line narrow, moderately deep.

Elytra oblong, convex; length 5.5 mm; greatest width 3.2 mm; basal border curved toward very obtusely rounded humeri, joined to lateral border without angle; sides slightly arcuate to greatest width at ⅔ length, thence rounded to apex; preapical sinuosity faint; striae deep, very finely punctulate.

Underside entirely impunctate; metepisterna moderately narrowed posteriorly, length 1.5 times anterior width; abdominal sterna not impressed at sides. Legs slender.

Variation.—A third specimen, labelled the same as the allotype, differs considerably from the two type specimens by its larger size and by having a row of punctures on the posterior half of the lateral border of the pronotum. It is probably a variant of this species. If not, it represents a new species.

Etymology.—The name proposed for this species refers to its provenance.

Adrimus matoanus, new species
(Fig. 20)

Type specimen.—*Holotype,* female (CMNH): Brazil, Mato Grosso, Diamantino, Facienda Sao Joao, 6.II.1981, 450 m, Ekis & Young (white light). The holotype is missing the left antenna, the left prothoracic leg and all the right legs. Specimens examined: 1.

Diagnosis.—Group One species distinguished by small size, relatively flat pronotum and elytra; legs brown; antennae black, scape ferrugineous; outer elytral striae deep at base and apex, shallow in middle.

Description.—Length 6.7 mm; greatest width 2.7 mm. Upper surface black, shiny, not iridescent; legs and palpi brown; antennae black with scape ferrugineous; underside black, apex of last sternum brownish.

Head (including eyes) as long as wide; eyes wide and moderately convex (similar to Fig. 6), temples nearly disappeared; frontal impressions short, parallel, wide, barely reaching level of anterior margin of eyes; frons very convex, smooth. Antennae very thin, elongate, extending beyond pronotal base by three antennomeres.

Pronotum (Fig. 20); length 1.3 mm; transverse (r_d = 0.68); slightly convex behind submarginal sulcus; basal impressions deep, narrow; space between impressions and basal angles nearly flat; space between impressions depressed, slightly punctate; hind angles slightly raised; median impressed line very thin, shallow.

Elytra oblong, slightly convex; length 4.1 mm; greatest width 2.7 mm; basal border nearly straight toward obtusely rounded humeri, joined to lateral margins with an obtuse angle; sides nearly straight and very little divergent posteriorly to greatest width at ¾ length, thence rounded to apex; no preapical sinuosity; striae 1 and 2 deep, very finely punctulate at base; striae 3 deep in basal half; remaining striae moderately deep at base and apex, nearly effaced in middle.

Underside entirely impunctate; metepisterna moderately narrowed posteriorly, length 1.3 times anterior width; abdominal sterna not evidently depressed at sides. Legs moderately slender [some missing from only known specimen].

Etymology.—The name proposed for this species indicates its provenance.

Adrimus irideus, new species
(Fig. 21)

Type specimens.—*Holotype,* male (CS): R[epublica]. A[rgentina]. Entre Rios, Parana Guazu, 22.6.54. *Allotype,* female (CS): same data as holotype. Both specimens with hand-written labels, without collector's name. Both specimens were presented to me by my late friend J. Nègre. The holotype is missing the right prothoracic leg and the left mesothoracic leg. Specimens examined: 2.

Diagnosis.—Group One species distinguished by wide general habitus; strong elytral iridescence; inner striae deep, outer striae shallower at middle; inner intervals convex, outer intervals flat at middle, deep depression in basal ⅕ of elytra.

Description.—Length 7.5–8.3 mm (holotype 7.7 mm); greatest width 3.2–3.4 mm (holotype 3.2 mm). Upper surface black, shiny, elytra strongly iridescent; lateral margin of pronotum reddish before base; legs, antennae and palpi brown; underside brown.

Head (including eyes) as long as wide (1.6 mm); eyes moderately convex (similar to Fig. 6), temples nearly disappeared; frontal impressions wide, moderately deep, short, barely reaching level of anterior supraorbital seta; frons very convex, smooth. Antennae thin, elongate, extending beyond pronotal base by four apical antennomeres.

Pronotum (Fig. 21); length 1.65 mm; transverse (r_d = 0.70); convex behind very deep submarginal sulcus, much flatter in basal half; basal impressions deep, narrow; space between impressions and angles rather flat with a few superficial punctures; space between impressions slightly depressed with many scattered punctures; hind angles not raised; median impressed line narrow, moderately deep, not reaching base.

Elytra oblong, convex, with a deep depression at ⅕ of length from base; length 5 mm; greatest width 3.4 mm; basal border slightly curved to humeri, joined to lateral margin without angle; sides slightly and uniformly arcuate to greatest width at mid-length, thence obtusely rounded to apex; preapical sinuosity very faint; striae 1–4 deep throughout, striae 5–7 always shallower except at base and apex; inner striae very finely punctulate in basal half; intervals 1–4 moderately convex, remaining intervals convex near base and apex, nearly flat at middle.

Underside smooth, impunctate; metepisterna elongate, strongly narrowed posteriorly, length more than 1.5 times anterior width; abdominal sterna depressed at sides. Legs slender.

Etymology.—The name proposed for this species refers to the strong iridescence of the elytra.

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